

SECTION 46010

WATER TREATMENT PLANT OPERATIONS, MAINTENANCE AND REPAIR

1. APPLICABLE PUBLICATIONS

1.1 The following list of publications form a part of this contract specification. The latest version of all industrial standards/regulations and/or Federal, State or Local Laws shall govern the operation procedures of this contract.

1.1.1 U.S. ARMY REGULATIONS

420-46

Facilities Engineering - Water & Sewage

TM 5-660

Maintenance & Operation of Water Supply, Treatment and Distribution Systems

TM MED 576

Sanitary Control and Surveillance of Water Supplies at Fixed Locations

ACOE 385-1-1

US Army Corps of Engineers, Safety and Health Requirements Manual

1.1.2 FEDERAL REGULATIONS

PL 93-523

Safe Drinking Water Act (SDWA)

40 CFR Part 141

National Primary Drinking Water Regulation (NPDWR)

40 CFR Part 142

NPDWR Implementation

40 CFR Part 143

National Secondary Drinking Water Regulations

1.1.2 STATE OF ARIZONA REGULATIONS

ARS 49-101

Arizona Potable Water Standards

ARS 49-201

State of Arizona Department of Environmental Quality Pamphlet "Public and Semi-Public Water Supply System Rules", Chapter 4, Article 2, Sections R18-4-201 through R18-4-290. State of Arizona Department of Environmental Quality Pamphlet "Classification of Treatment Plants and Certification of Operators Rules", Chapter 4, Article 1, Sections R18-4-40 through R18-4-415.

1.1.3 NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
STANDARD

250
Enclosures for Electrical Equipment

1.1.4 U.S. ARMY PROVING GROUND (USAYPG)

Water Treatment Plant (WTP) Operations and Maintenance Manual

2. GENERAL REQUIREMENTS

2.1 The contractor shall be responsible for providing acceptable product water in the quantities indicated, by operating the water treatment plant and/or associated systems according to the water treatment plant Operations Manual to the maximum purification ability designed into the plant and/or system, by its respective manufacturer.

2.1.1 The contractor will be subject to unannounced inspections by personnel from the Yuma Proving Ground's offices of Preventive Medicine, Environment and/or Safety and the Arizona Department of Environmental Quality Drinking Water Compliance Division, Contracting Office, and the Contracting Officer's Representative (COR). Discrepancies identified by inspecting personnel during these inspections will be corrected, as directed by the COR and/or Contracting Officer.

2.2 The contractor shall be responsible for providing all supplies, materials, equipment, labor and supervision necessary for complete operation, maintenance and repair of the water treatment plant and components located at Yuma Proving Ground (YPG) according to the Water Treatment Plant Operations Manual.

2.2.1 Contractor responsibilities under this contract exclude the operation, maintenance and repair of ground water source wells and the potable and non-potable water distribution networks.

2.3 TESTING: The Contractor shall be responsible for performance of all sampling and testing of the source and product water required under the contract.

2.4 OPERATIONS AND MAINTENANCE (O&M): The Contractor shall be responsible for performing all work necessary for the operations preventive maintenance, and repair required to maintain optimal plant operating conditions. This includes cleaning and maintenance of the brine pond once in Fiscal Year (FY) 07, once in FY 09, and once in FY 11, as described and set forth in the WTP Operations and Maintenance Manual.

2.4.1 The Contractor shall be responsible for the procurement of all supplies, materials, parts, tools and equipment necessary for performance of the required operations, preventive maintenance, and repair of the Water Treatment Plant.

2.5 The Contractor shall ensure that only qualified, experienced personnel are employed to work under this contract.

2.6 The Contractor shall maintain all areas of Government property used by them or their personnel during the performance of this contract. This includes all storage and work areas be kept in a neat, freshly painted and clean manner at all times.

2.7 The Contractor shall be responsible for instructing all Contractor employees in proper fire and safety procedures and shall comply with all applicable Federal, State and local YPG regulations.

2.7.1 Health hazard warnings found on labels or Material Safety Data Sheets (MSDS) for cleaning solvents and/or other hazardous chemicals shall be strictly followed. All MSDS shall be posted in a WTP Hazard Communications Plan, all in accordance with the Occupational Safety and Health Administration (OSHA) requirements.

2.8 The Government will provide to the Contractor a class "C" telephone line for "on-post" use only. Local and long distance telephone service and all telephone instruments shall be the responsibility of the Contractor.

2.9 The Contractor shall be responsible for maintenance and upkeep of the Water Treatment Plant Operations and Maintenance Manual.

2.9.1 The Contractor shall amend the Operations and Maintenance Manual as necessary when changes to the water treatment plant systems and/or components are made. All changes and/or revisions shall to be submitted to the COR for approval.

2.9.2 The Contractor shall provide to the COR, for approval, proposals of any improvements or revisions to the WTP facilities or its components. The proposal shall include drawings, details of the project i.e. how will it improve the plant or system and what will happen if the project is not approved, cost and any test or other related data to the project. The Contractor shall as built drawings of the WTP of any improvements/or revisions having been completed.

2.10 The Contractor shall ensure that all employees are capable of demonstrating adequate knowledge of all chemicals, tools, equipment and techniques necessary to competently perform the work. The Contractor shall provide each employee with adequate training in order to competently perform the work requirements of this contract.

3. MATERIALS & EQUIPMENT

3.1 All materials and equipment shall conform to the respective publications and requirements as described and set forth in the WTP Operations and Maintenance Manual. Other materials and equipment shall be as specified elsewhere herein and shall be the products of manufacturers regularly engaged in the manufacture of such products. Items of chemicals, parts and/or equipment shall essentially duplicate those that have been in satisfactory use.

3.1.1 ELECTRICAL MOTORS: All replacement electrical motors shall be of the type and size as recommended by the water treatment system manufacturer.

3.1.2 PUMPS: All replacement pumps shall be of the size and type as currently in use.

3.2 CHEMICALS AND SUPPLIES: The Contractor shall be responsible for the purchase of all water treatment chemicals (inclusive of salt, acid, etc.), tools, spare parts, replacement parts and equipment and other consumable supplies, such as oil, grease, solvents, laboratory equipment, filters, etc, necessary for operational and maintenance requirements of the water treatment plant. The cost of these supplies shall be reimbursed to the Contractor under the applicable contract line item number (CLIN) Materials and Supplies.

3.3 SPARE PARTS: The contractor will be provided with an inventory of the recommended supplies and spare parts, as listed in the WTP Operations and Maintenance Manual. When supplies and/or parts are expended from the inventory, the contractor shall be responsible for replacement and restock to the required levels.

3.4 All parts, equipment, tools and/or supplies purchased by the Contractor and reimbursed by the Government under the applicable contract line item number (CLIN) shall become the property of the Government.

3.5 All hand tools required for the performance of the contract in addition to those currently on hand, will be provided by the Government. Additional tool requirements shall be procured by the Contractor as a reimbursable purchase requirement. The Contractor shall ensure that all tools procured are obtained at the best price available and are provided with a lifetime replacement warranty from the manufacturer, where available.

3.6 PURCHASING REQUIREMENTS: The Contractor shall make every reasonable attempt to ensure that all parts, equipment, tools and/or supplies purchased by the Contractor and reimbursed by the Government, are obtained at the best price currently available.

3.6.1 On any item purchase having a cost at or in excess of five hundred dollars (\$1000.00) per unit, the Contractor shall obtain a

minimum of three (3) competitive "cost" quotes. "Cost" shall be defined as "the item's unit price plus any and all shipping and handling charges.

3.6.2 The Contractor shall prepare and submit a purchase request for all purchase requirements under the contract. The purchase request shall be submitted to the COR prior to purchase, for approval.

3.6.3 If the sum total of the purchase request is \$2,500.00 or less, the COR may authorize the purchase. However, if the total is in excess of \$2,500.00, the proposal shall be forwarded to the Contracting Officer, by the COR, for approval. In all cases, the following procedures shall be followed.

3.6.3.1 Submit to the COR a purchase request for all parts, equipment, tools and/or supply requirements. The purchase request will be reviewed by the COR, and if determined acceptable, will be approved by signature on the purchase request and returned to the Contractor.

3.6.4 Only those purchase requirements approved by the COR or the Contracting Officer, will be paid for by the Government except for emergency repairs required after duty hours and after reasonable attempts to reach the off duty COR. Any purchases made prior to approval will not be paid for by the Government.

3.7 Accountability of all Government provided and all procured reimbursable parts, equipment, tools and/or supplies shall be the responsibility of the Contractor. Any and all unaccountable Government furnished property, including procured reimbursable parts, equipment, tools and/or supplies which cannot be accounted for by the Contractor, shall be replaced by the Contractor at no additional cost to the Government.

4. PERFORMANCE

4.1 All operations, maintenance and emergency repair work shall be performed in strict accordance with the Technical Specifications and the Water Treatment Plant Operations and Maintenance Manual, unless directed otherwise, by the COR.

4.2 Any water treatment plant component repair and/or replacement requirement shall be documented by the Contractor on the Monthly Performance Report, as required by paragraph 7 herein.

4.2.1 Any water treatment plant component repair and/or replacement found to be required due to negligence on the part of the Contractor, because of improper operations or failure to perform required Preventive Maintenance in accordance with the Water Treatment Plant Operations and Maintenance Manual shall be

performed at no additional cost to the Government.

4.3 The Contractor shall maintain the Government furnished equipment listing, expendable supplies inventory, all water quality analysis data, equipment data, service record data, repair record data and motor service data, in a data base format utilizing a Government furnished IBM compatible computer and applicable software.

4.4 The Contractor shall utilize equipment manufacturer's operating and maintenance manuals, available at the plant and/or from the appropriate supplier, for instructions in the removal, replacement, and repair of the water treatment system components and associated parts required by each "brand" of system component.

4.5 Operations, maintenance and emergency repairs are all mandatory under the requirements of this contract operation and maintenance of the WTP is considered the highest priority. Emergency repairs performed by operations and maintenance personnel, within normal duty hours after the performance of daily operations and/or maintenance is without additional labor charges to the Government. In the event emergency repairs which cannot be performed within normal duty hours, the contractor shall provide additional personnel to perform the required emergency repairs. The COR may authorize additional hours, upon request of the contractor if emergency repairs are considered to be critical.

4.6 PHASE-IN PERIOD: Fifteen (15) days prior to commencing full contract responsibilities, the new Contractor shall provide a designated State of Arizona, (ADEQ) Certified Grade 4 WTP Operator/Manager. During this time, the current Contractor shall ensure that the newly designated Plant Manager becomes thoroughly knowledgeable in all aspects of the plant's operations and maintenance requirements.

4.7 INITIAL CONTRACT PERFORMANCE: The Contractor shall be responsible for providing uninterrupted operation of the WTP immediately upon commencement of the contract period. In addition, within thirty (30) days from commencement of the contract period, the following requirements shall be met.

4.7.1 Belts, pulleys, chains, gears, couplings, projecting set-screws, keys, and other rotating parts so located that any person can come in close proximity thereto shall be properly guarded.

4.7.2 DEFICIENCIES, SAFETY HAZARDS, AND CODE VIOLATIONS: Any deficiencies, safety hazards or code violations in the existing electrical system, plumbing, equipment, devices or installations that is not indicated or specified to be corrected shall be promptly reported to the COR.

4.8 The incumbent contractor shall remove all Contractor owned equipment, materials, etc. and restore the area to its original

condition 15 days prior to the termination date of the current contract. The current Contractor shall notify the COR when this has been accomplished for a walk-through inspection of the WTP, other facilities and areas under this contract. Any deficiencies shall be noted in writing and submitted to the Contractor by the COR. The Contractor shall then correct the deficiencies by termination date of the current contract.

5. WORKMANSHIP

5.1 Materials and equipment shall be installed in accordance with the approved recommendations of the manufacturer and conform to all contract documents. All installations shall be accomplished in a professional manner, by workmen skilled in this type of work.

5.2 Electrical Work: Electrical work required within the WTP or any facility and/or component shall be the responsibility of the contractor and shall conform to the National Electrical Code (NEC).

6. ENGINEERING SUPPORT

6.1 The contractor shall provide professional engineering support and more elaborate water testing on an as-needed basis for requirements that arise which are beyond the capabilities of the Contractor's Plant Manager or the Government's engineering personnel to resolve.

7. REPORTING REQUIREMENTS

7.1 MONTHLY PERFORMANCE REPORTS: Reports shall be prepared and submitted to the COR for all water treatment operations, maintenance and/or emergency repair work performed no later than the 15th of the following month. All reports shall include as a minimum:

1. System Performance: Total volume of raw water; total volume of irrigation water; total volume of product water; total volume of brine waste; total chemical usage and kilowatt hours used.

2. Water Quality Analysis Data Sheets; EDR Unit Run Data Sheets; EDR Unit Voltage Probe Data Sheets; Trouble Reports; Coupon test results (as applicable).

3. Account and inventory of spare parts, equipment and supplies. The Contractor shall perform random sampling of all inventories monthly and 100% of all inventories semi-annually.

4. Reports shall consist of reports on and project adequacy of equipment for technical, operational and maintenance considerations; provide detailed explanation and analysis of proposed and/or executed changes in operations; make recommendations for adjustments and facilities needed or required. The contractor shall be responsible for reporting all appropriate

data and information to accomplish the objective.

Reports shall be prepared utilizing the Government furnished computer system and WTP databases. Two copies of the report shall be submitted to the COR in three-hole binders as follows:

7.2 ANNUAL OPERATIONS REPORT: The annual report shall provide overall operational data for the WTP for each given year. In addition, the annual report shall include long-range results, conclusions and recommendations. The report shall be submitted to the COR in a similar format as the Monthly reports with the addition to the following:

7.2.1 FINAL REPORT: Provide one original and two copies by 15 October of each year of contract period.

8. REPAIR

8.1 All repair requirements of the water treatment plant determined to be required by the Contractor shall be accomplished by the Contractor as part of their responsibility for the facility. Labor costs shall be included with the monthly charge.

8.2 Emergency Repair is defined as that repair requirement which exceeds the normal operational and maintenance requirements, as indicated in the WTP Operations and Maintenance Manual, which is required when an unforeseen occurrence or sudden major breakdown effects the normal operation of the water treatment plant, thereby affecting the health and welfare of personnel. Immediate action shall be taken to correct the operating discrepancy and to return the system to normal operation.

8.3 Any repair accomplished by the Contractor will be in response to the receipt of a service order with signature approval. The contractor is only to perform the work in accordance with the job description indicated on the form.

8.3.1 EMERGENCY REPAIR RESPONSE TIME: The Contractor shall respond to emergency calls within 1 hour of notification by the COR and/or Contracting Officer. In the case of emergency repair the COR or Contracting Officer may give verbal approval with follow up of a signed service order.

8.3.2 Upon receipt of a service order the Contractor shall inspect the requirement and make a list of all materials required. The list shall be submitted, along with the service order, as a "Cost Proposal" to the COR for final signature approval prior to beginning the work.

8.3.3 Only the Not to Exceed, (NTE) cost approved by the COR and/or the Contracting Officer, included on an approved service order will be paid for by the Government.

8.3.4 If the cost proposal is \$2,500.00 or less, the COR may authorize the work. If the proposal is in excess of \$2,500.00, the proposal shall be forwarded to the Contracting Officer, by the COR, for approval.

8.4 Parts and materials furnished and installed shall be new and paid for by the Government at the Contractor's cost. Materials and parts used shall be documented on a supplier's statement of billing or invoice of purchase which must be provided with each completed repair accomplished by the Contractor.

8.5 The Government reserves the right to review all materials and parts cost submitted by the Contractor.

8.6 The Contractor shall provide all removed parts replaced as part of any repair for analysis and verification of replacement by the COR.

8.7 All repair work initiated shall be accomplished that day, unless otherwise approved by the COR.

8.8 All work performed under this contract shall include any and all painting required in conjunction with repairs or installation as determined necessary by the COR.

****END OF SECTION****